

INSTRUCTION BOOK

MODEL 626

IMPORTANT

1. You should be cautious because of the up-and-down movement of the needle; you should watch the sewing machine permanently when sewing.
2. When the needle, the presser foot, the bobbin or other parts are being changed, during a work break or during maintenance work, the machine should be turned off, i.e. put out of circuit by pulling the plug out of the terminal at the motor or the wall socket.
3. Do not place anything on the foot controller, otherwise, the machine may start inadvertently or the foot controller and the motor may be overheated.
4. The permissible maximum power of the lamp must be 15 watts.
5. When you use your sewing machine for the first time, place a piece of cloth under the presser foot and run the machine without thread for a few minutes and then wipe off oil on the surface.

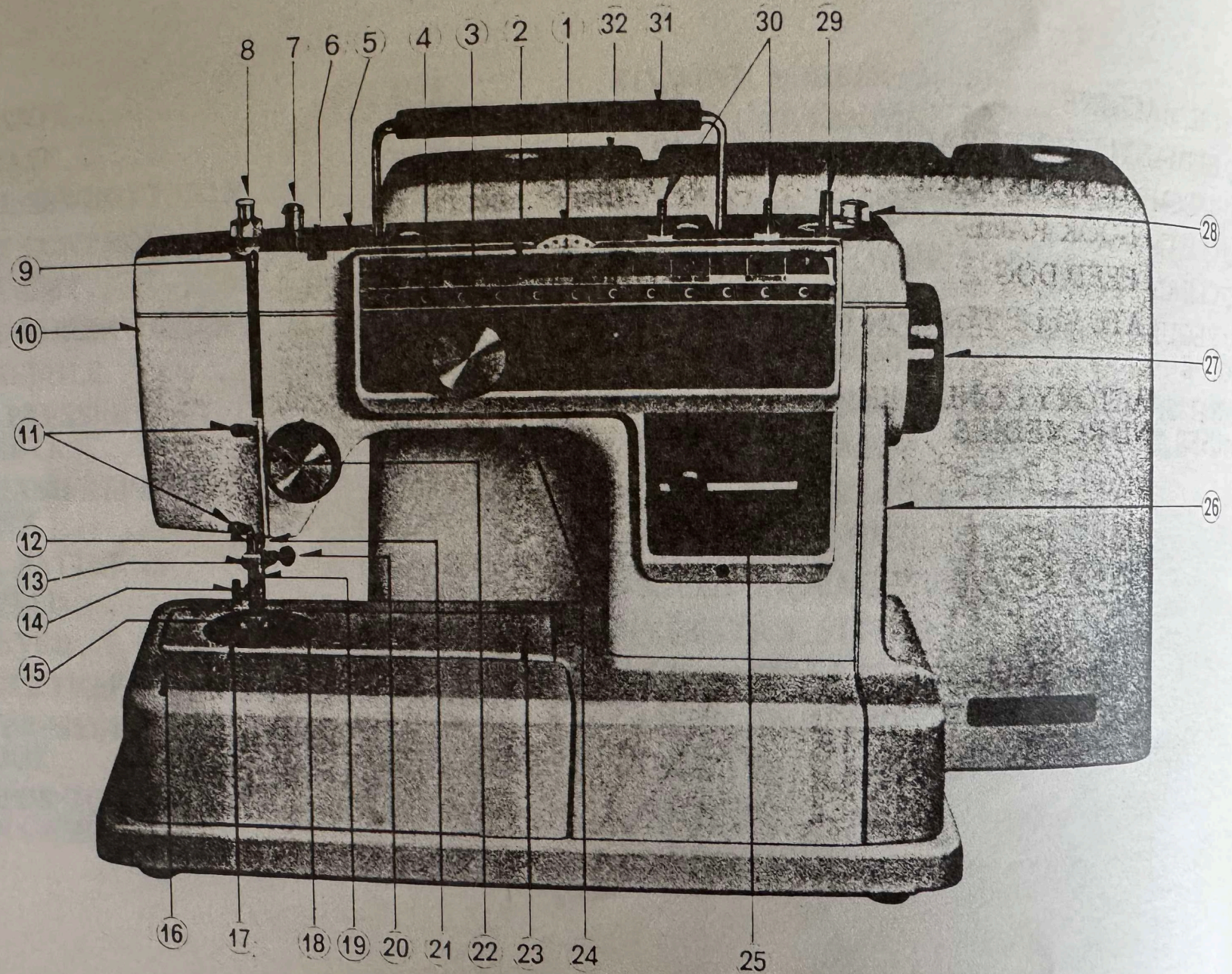
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NAMES OF PARTS

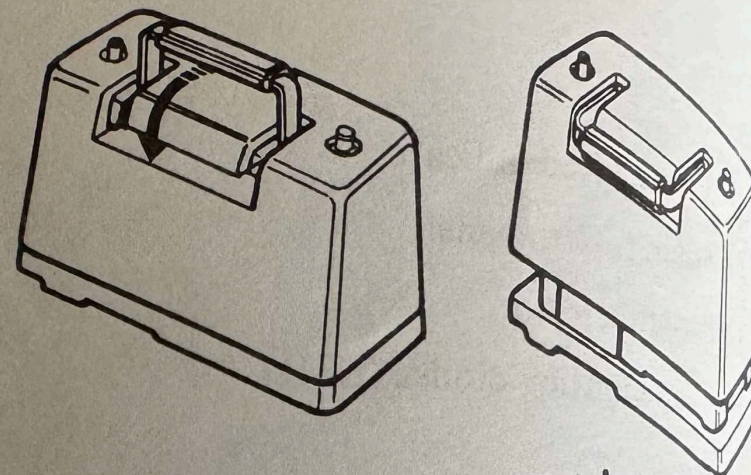


NAMES OF PARTS

- ① Variable feed indicator
- ② Stitch pattern panel
- ③ Pattern selector
- ④ Light emitting diodes (LED)
- ⑤ Top cover
- ⑥ Top cover thread guide
- ⑦ Bobbin winder thread guide
- ⑧ Pressure regulator
- ⑨ Thread take-up lever
- ⑩ Face plate
- ⑪ Face plate thread guides
- ⑫ Needle bar
- ⑬ Needle bar thread guide
- ⑭ Thumb screw
- ⑮ Presser foot and foot holder
- ⑯ Detachable sewing table
- ⑰ Needle plate
- ⑱ Feed dog
- ⑲ Needle
- ⑳ Needle clamp screw
- ㉑ Presser bar
- ㉒ Thread tension regulator
- ㉓ Free arm cover
- ㉔ Arm
- ㉕ Reverse lever
- ㉖ Belt cover
- ㉗ Balance wheel
- ㉘ Bobbin winder stopper
- ㉙ Bobbin winder spindle
- ㉚ Spool pins
- ㉛ Carrying handle
- ㉜ Carrying case

CARRYING CASE

When removing or attaching plastic carrying case, tilt the handle back until it rests flat on top cover.



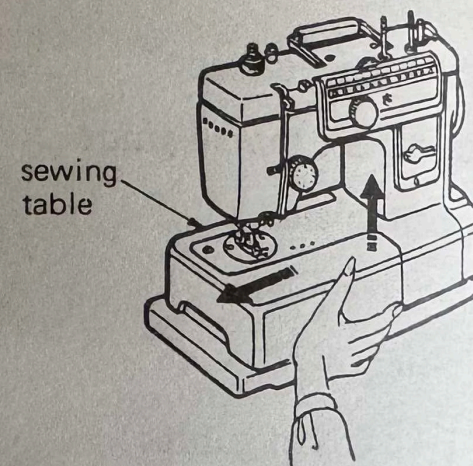
DETACHABLE SEWING TABLE

For ordinary sewing, sewing table will provide more sewing space and make your work easier.

But, when sewing tubular material, detach the table for free arm sewing.

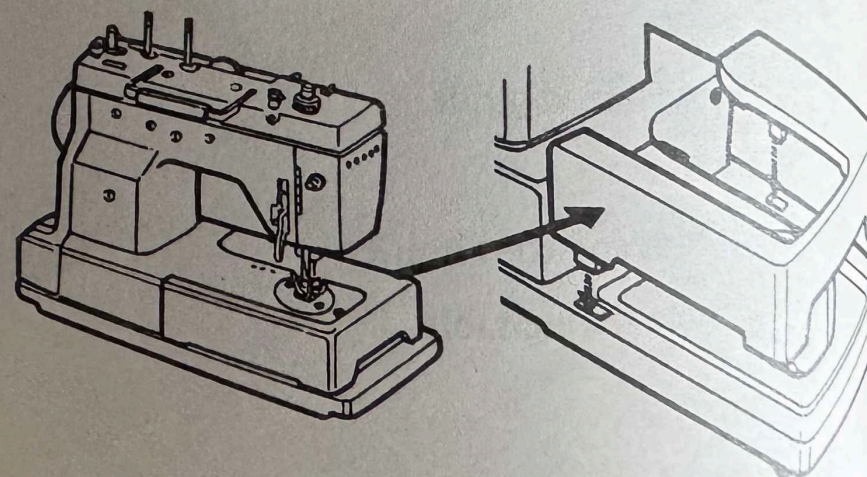
* HOW TO DETACH

1. Lift the sewing table.
2. Slide it out of the free arm.



* HOW TO ATTACH

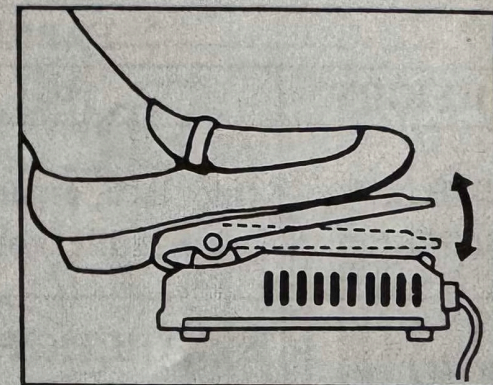
Slide sewing table over free arm until the projections meet their corresponding notches on the base plate.



TO USE FOOT CONTROL

Gently step on the foot controller, as you turn the balance wheel toward you when starting
The speed of the machine can be controlled with foot control – light pressure giving low speed and more pressure higher speed.

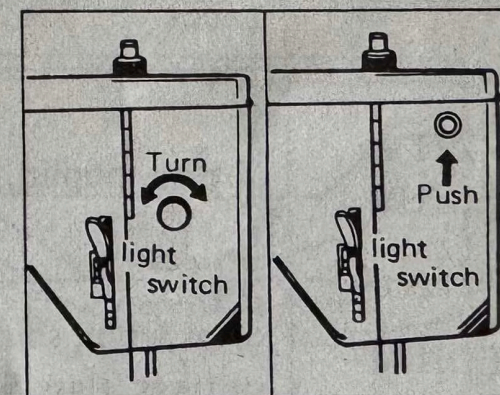
Note: Do not place anything on foot controller, otherwise, the machine may start inadvertently or foot controller may be overheated.



TO USE SEWLIGHT

* SWITCH

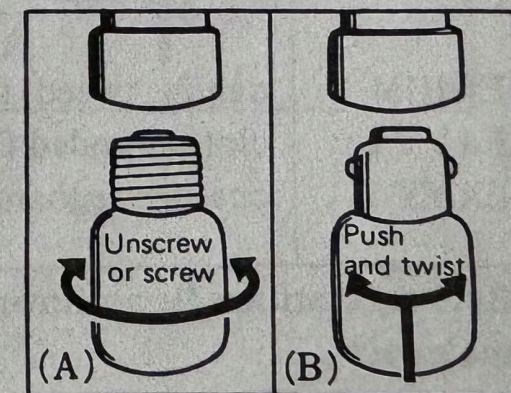
The sewlight switch is found on the back of face plate.



* CHANGING BULB

Bulb Type (A): To remove — Unscrew
To replace — Screw

Bulb Type (B): To remove — Push and twist anti-clockwise
To replace — Push and twist clockwise



* Use a 15-watt bulb.

NEEDLE AND THREAD CHART

FABRIC		THREAD	NEEDLE
WEIGHT	TYPE		
FINE or LIGHT	fine lace, organdie, chiffon, silk, lawn, crepe, tulle, voile, fine linen, georgette	Silk thread 50 Fine polyester thread Fine cotton thread	#9 or #11
LIGHT or MEDIUM	SYNTHETIC FABRICS: jersey, fine knit, bonded knits, nylon tricot	Silk thread 50 Polyester thread 50 Mercerized cotton thread 50 ~ 60	Blue tip scarf needle
LIGHT or MEDIUM	cotton, poplin, taffeta, linen, satin	Silk thread 50 Polyester thread 50 Mercerized cotton thread 50 ~ 60	#11 or #14
MEDIUM	dress wool, shirtings, crimplene, gingham, suitings, glass fibre, percale	Mercerized cotton thread 50 ~ 60 Polyester thread 50	#14
MEDIUM HEAVY or HEAVY	denim, tweed, flannel, corduroy, terry cloth, bonded fabrics, coatings, over-coatings, gabardine	Polyester thread 40 ~ 50 Heavy-duty mercerized cotton 40~50	#14, #16 or #18

- Blue tip scarf needle as shown in the page 26 is effective in preventing skipped stitches with stretch materials.

TO INSERT NEEDLE

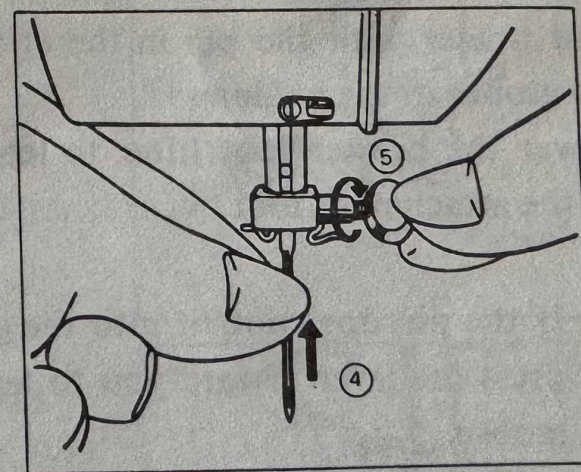
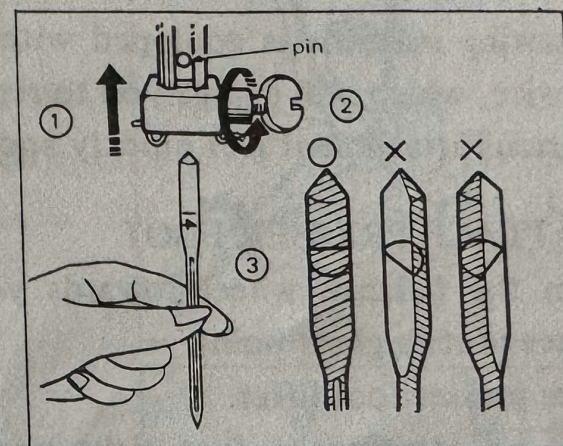
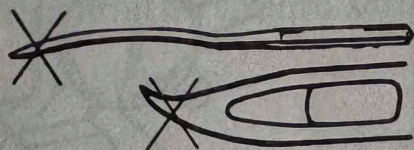
Insert the needle in the order of ①, ②, ③, ④ and ⑤.

- ①. Raise the needle to its highest point.
- ②. Loosen the needle clamp screw.
- ③. Face the flat side of the needle to the back.
- ④. Insert the needle as high as it will go until it hits the pin.
- ⑤. Tighten the needle clamp screw firmly.

* TO CHOOSE CORRECT NEEDLE

The needle should be straight and the point of needle should not be bent or blunt.

Select the large eye enough to permit the thread smooth passing.



TO CHANGE PRESSER FEET (SNAP-ON FEET)

Your sewing machine is equipped with the special snap-on foot device, which will enable you to replace the presser foot with various attachment feet quickly and easily.

* TO ATTACH PRESSER FOOT

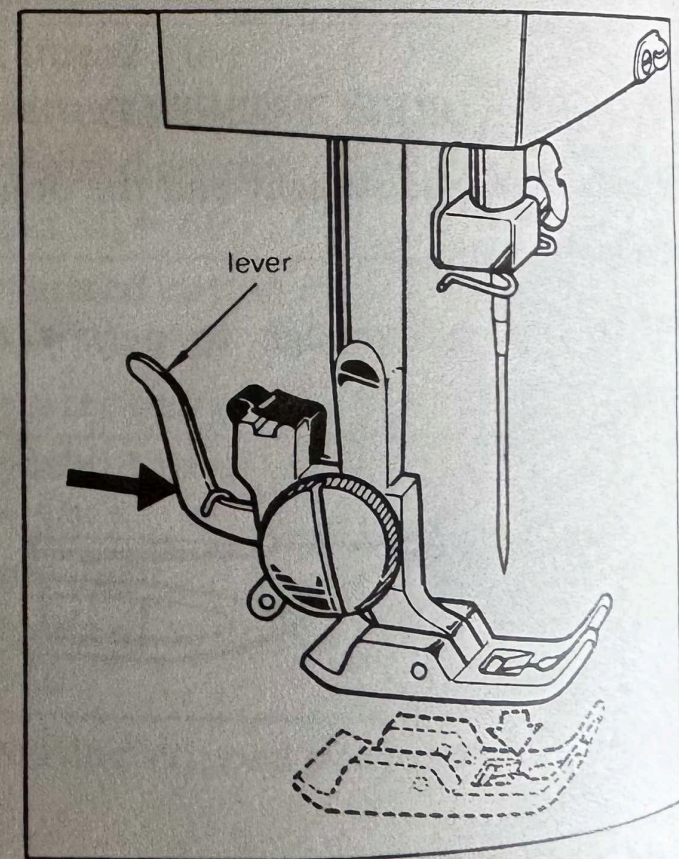
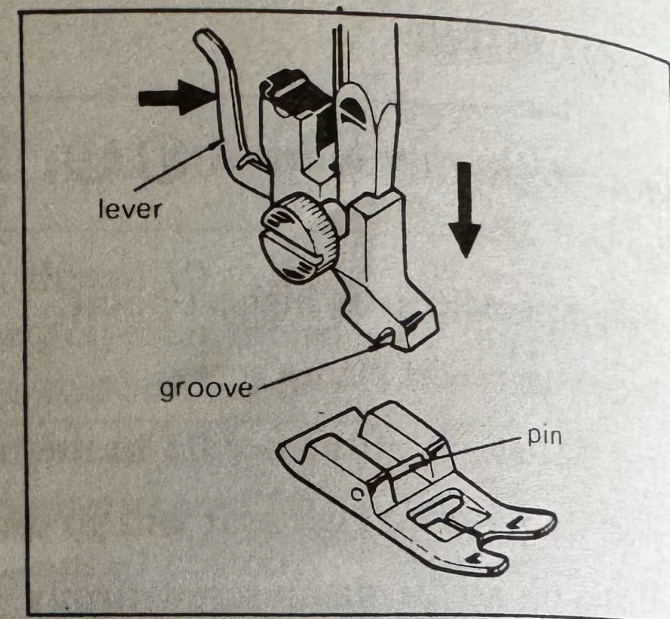
1. Turn the balance wheel towards you until the needle comes to its highest point.
2. Raise presser foot lifter.
3. Place an attachment foot right underneath the presser foot holder with the pin in the attachment foot against the groove in the holder.
4. Lower the presser foot lifter to let the foot holder ride on the attachment foot.

Note: If the pin does not fit into the groove automatically, press the lever toward you to let the pin slip into the groove.

* TO REMOVE THE PRESSER FOOT

Raise presser foot and press the lever extending from the back of foot holder toward you.

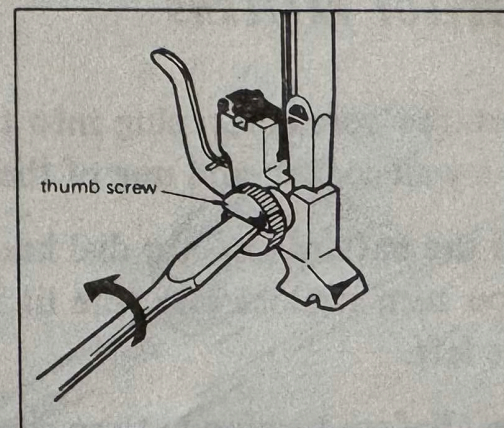
The presser foot will drop.



TO REMOVE AND REPLACE FOOT HOLDER

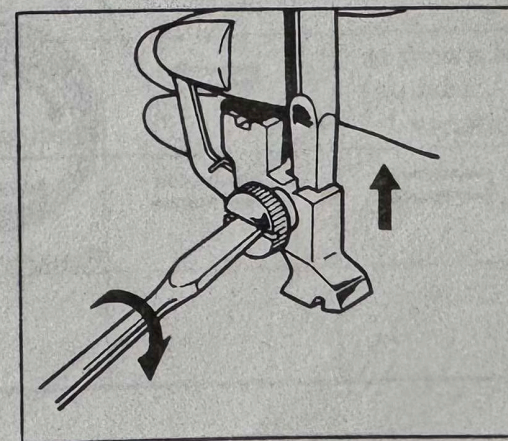
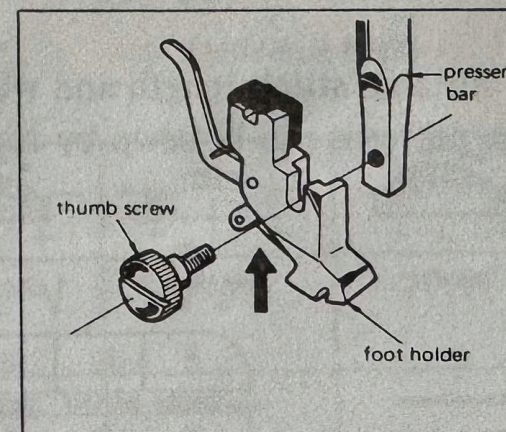
* TO REMOVE FOOT HOLDER

1. Turn balance wheel toward you until needle comes to its highest point.
2. Lift presser foot by raising presser foot lifter.
3. Remove foot from foot holder.
4. Loosen thumb screw with a screw driver.



* TO REPLACE FOOT HOLDER

1. Turn balance wheel toward you until needle comes to its highest point.
2. Lift presser bar by raising presser bar lifter.
3. Remove foot from foot holder.
4. Place foot holder to presser bar and raise it up as far as it will go as illustrated, then tighten the thumb screw with a screw driver firmly.



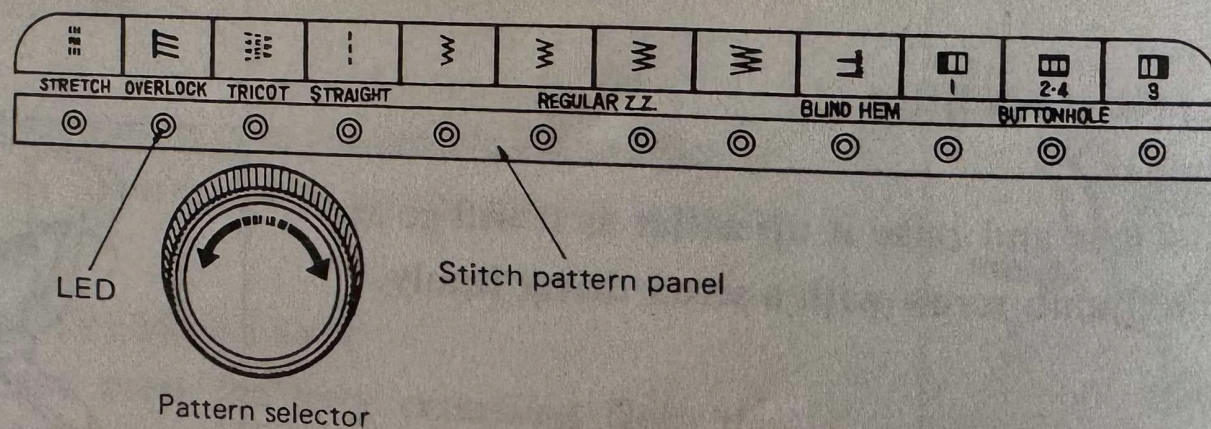
TO SELECT PATTERNS

Insert the connector plug into the sewing machine connector socket. Then, insert the power supply plug into a wall socket, and one of the light emitting diodes (LED) is lit up.

Turn the pattern selector dial knob until the LED of your desired stitch pattern is lit up. If you turn it clockwise, the lit LED will move right and if you turn it counterclockwise, the lit LED will move left.

Note: Before turning pattern selector, raise needle to its highest position.

The suitable stitch length and width for the selected pattern will be set automatically, but coarser or denser stitch patterns can be sewn by turning the variable feed indicator as shown in the page 13.

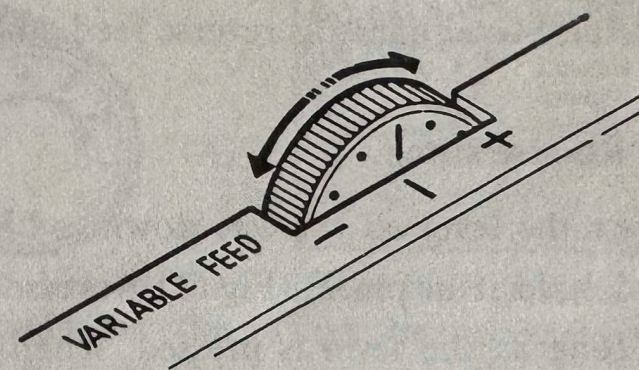


VARIABLE FEED


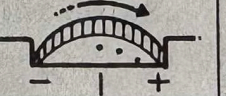


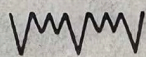
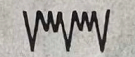
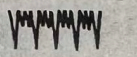
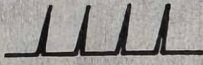

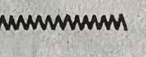
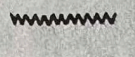
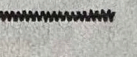
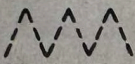
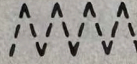
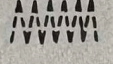

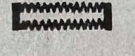
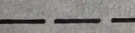
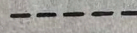
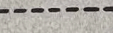

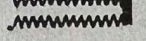
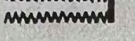
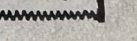


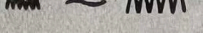
Ordinarily, you need not to adjust the feed or length of stitches since your machine automatically select a suitable feed for the stitch pattern you may select with the pattern selector.

In case you prefer either coarser or denser stitches, you can manually adjust the feed by turning the variable feed indicator to either "+" (coarse) or "-" (dense) directions.

Normally the variable feed indicator should be set to " | ".



VARIABLE FEED

VARIABLE FEED PATTERN				VARIABLE FEED PATTERN			
	-		+		-		+
≡≡≡	as shown right (no feed variation)		as shown left (no feed variation)				
///	as shown right (no feed variation)		as shown left (no feed variation)				
^v^v^v					as shown right (no feed variation)		as shown left (no feed variation)
---							
m ~ M							

REVERSE LEVER

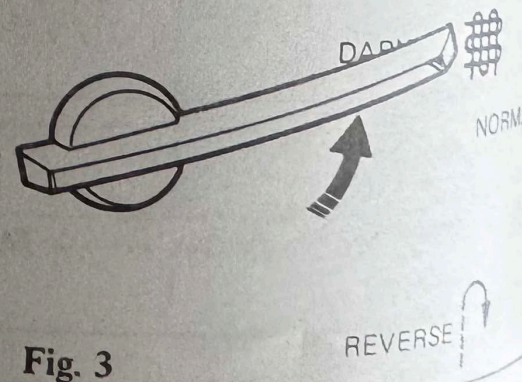
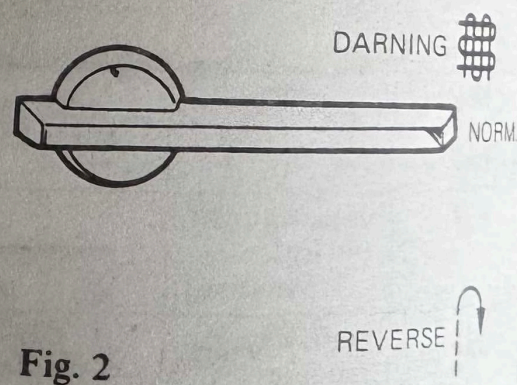
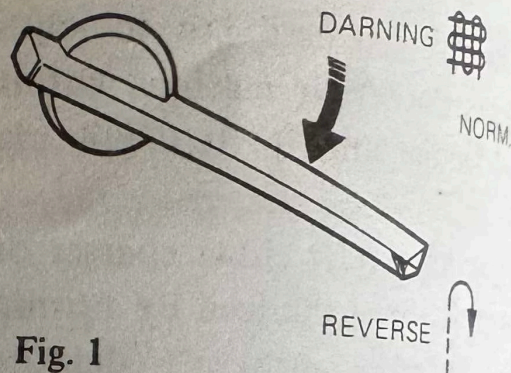
Reverse lever controls reverse feed and drop feed.

* Reverse stitch:

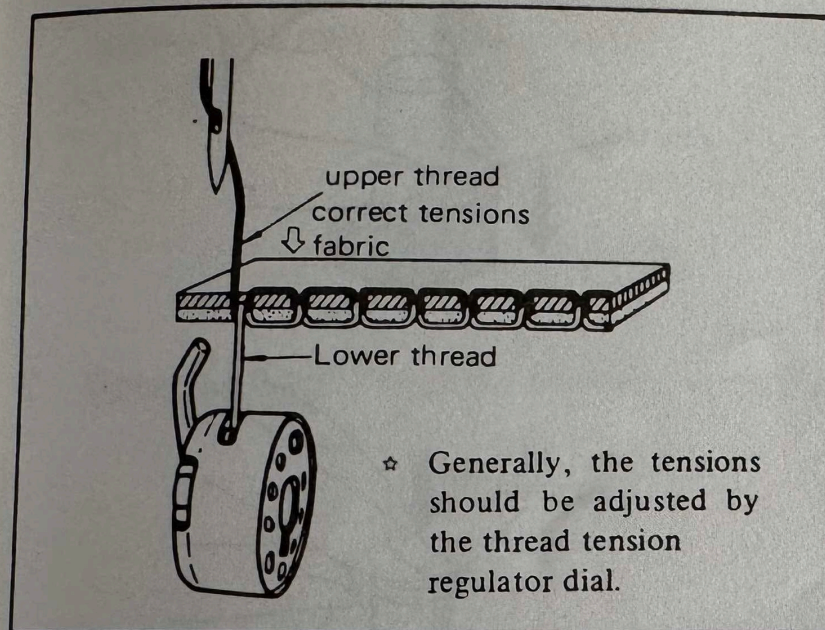
Press the lever all the way down to “REVERSE ↶” position and hold it in place. (Fig. 1) Reverse stitching will continue as long as the lever is pressed. When the lever is released, it will return to “NORM.” for forward stitching. (Fig. 2) Reverse stitch reinforces the seam when to start or to end stitching.

* Darning (Using drop feed device)

Raise presser foot and the lever at “DARNING ⌘” position. Then machine feed is disengaged permitting the free movement of fabrics. (Fig. 3)

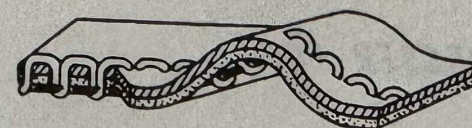


TO REGULATE THREAD TENSIONS

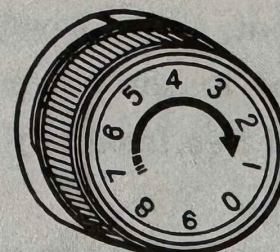


Correct tensions are important for the good appearance of the stitches. If the tensions are not correct, the result will be imperfect stitching. Adjust the tensions as illustrated.

- The selection of the thread tension depends on the type of material. Please test it by sewing on a sample material to obtain suitable thread tension.



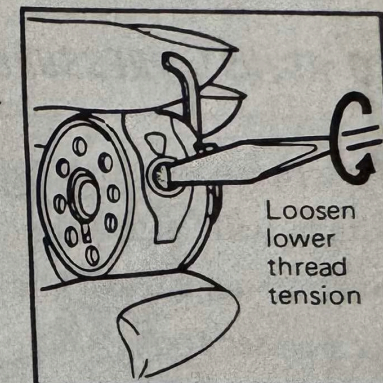
Tighten upper thread tension



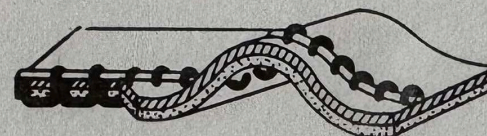
(A)

If the lower thread lies in the straight line underside of the fabric, this indicates that the top tension control is too weak. Setting this to No. 4 or higher will usually rectify the stitch.

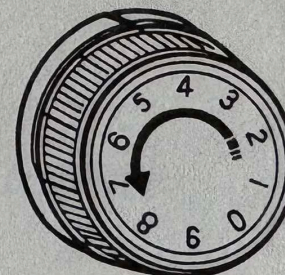
or



If the fault persists, it may be necessary to weaken the lower thread tension as illustrated (A).



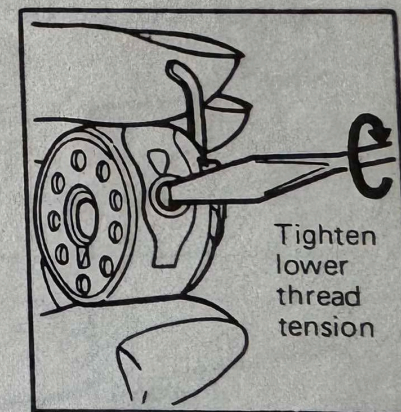
Loosen upper thread tension



(B)

If the upper thread lies in the straight line on top of the fabric, this indicates that the top tension control is set too tight. Setting this to No. 4 or lower will usually rectify the stitch. If the fault persists, it may be necessary to tighten the lower thread tension as illustrated (B).

or

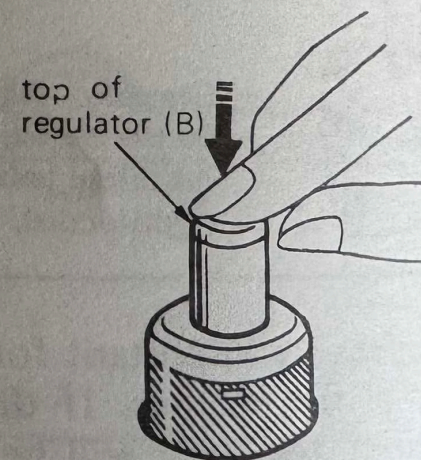
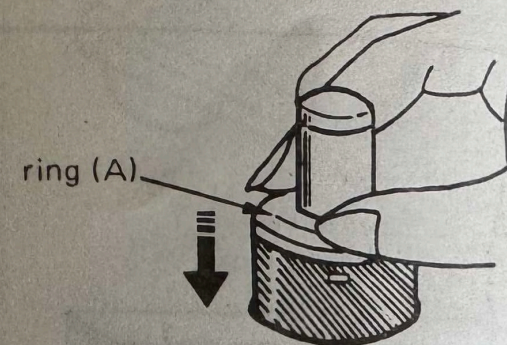


TO ADJUST PRESSURE ON PRESSER FOOT

To release pressure of the foot, press down the ring (A), which will allow the regulator to spring up to its highest position and leave the material free from any pressure from the presser foot.

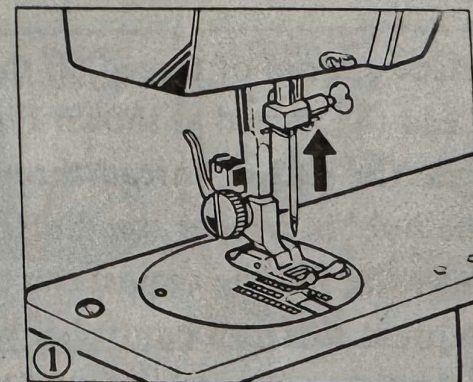
For sewing thin or light fabrics, press the top of the regulator (B) down slightly to get the required light pressure on the fabric.

For sewing thicker or heavier fabrics, push the top of the regulator down further, in order to get a stronger pressure on the presser foot on the fabric.

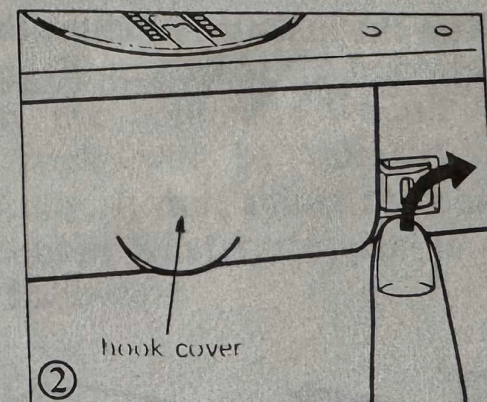


TO REMOVE OR TO INSERT THE BOBBIN CASE

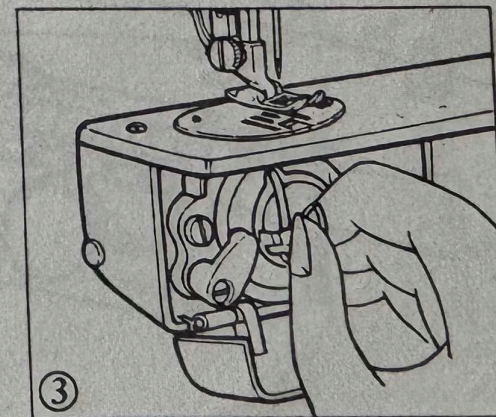
1. Turn the balance wheel towards you until the needle bar is at the highest point of its travel.



2. Open the hook cover by pressing hook cover opener to the right.



3. Open the latch to its fullest extent, and withdraw or insert the bobbin case.



* When inserting the bobbin case, be sure to let the latch catch on the center pin with a click.

TO WIND BOBBIN

1. Place a spool of thread on the left-side spool pin.
2. Lead the thread as shown Fig. 1 between the discs of the bobbin winder thread guide.
3. Pass the end of thread through the hole in the bobbin from inside to outside and place the bobbin on the bobbin winder spindle. (Fig. 2)
4. Push the spindle against the bobbin winder stopper. (Fig. 3)
5. Depress the foot controller while holding the thread end. When the thread is wound a little, cut the free end of thread at the edge of hole in the bobbin.
6. Run the machine until the thread is wound sufficiently in the bobbin.
7. Pull the spindle toward you and cut the thread.

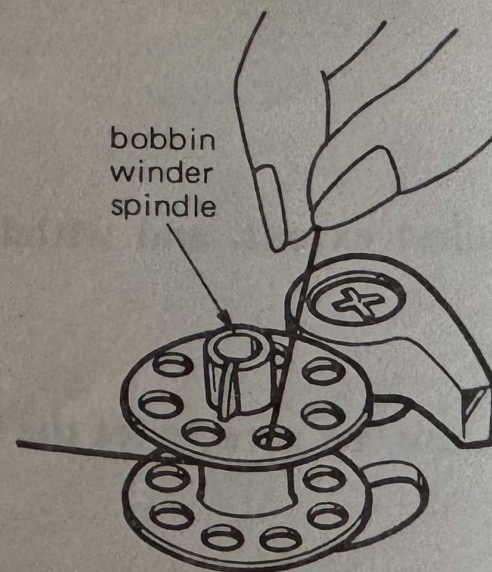
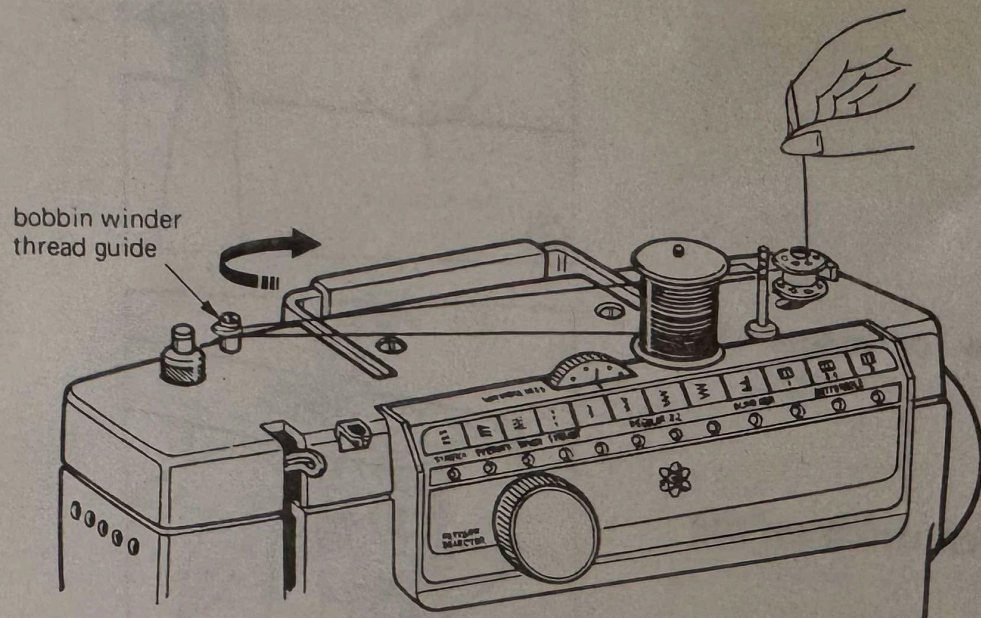


Fig. 2

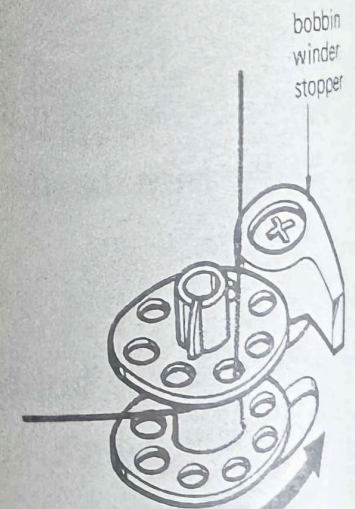


Fig. 3

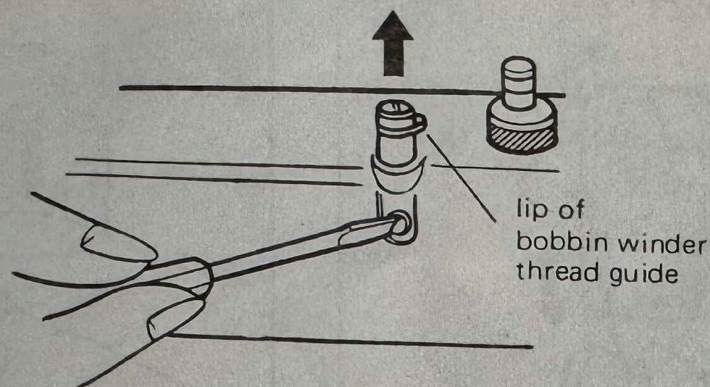
TO ADJUST WINDING BOBBIN

The bobbin must be wound evenly.

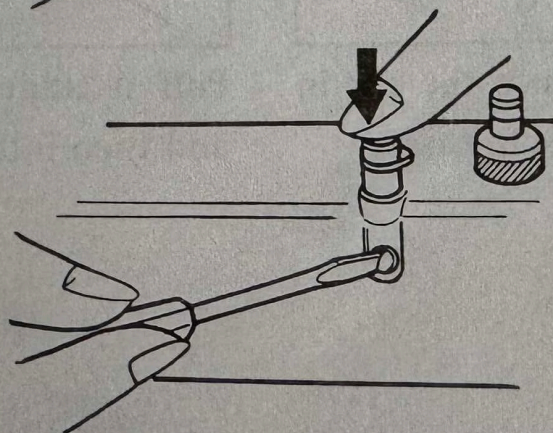
Correct winding



Incorrect winding



Incorrect winding



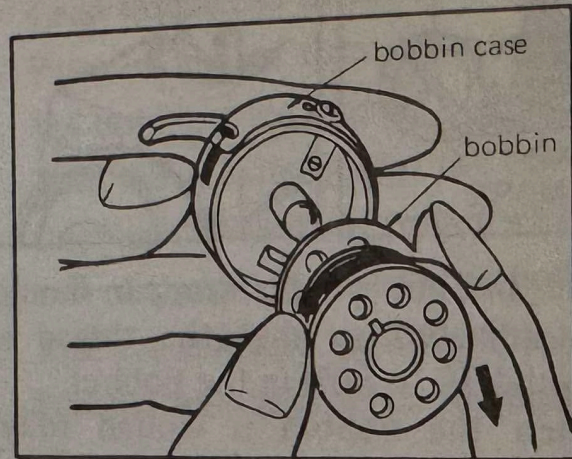
Note: The lip of bobbin winder thread guide should point to the right.



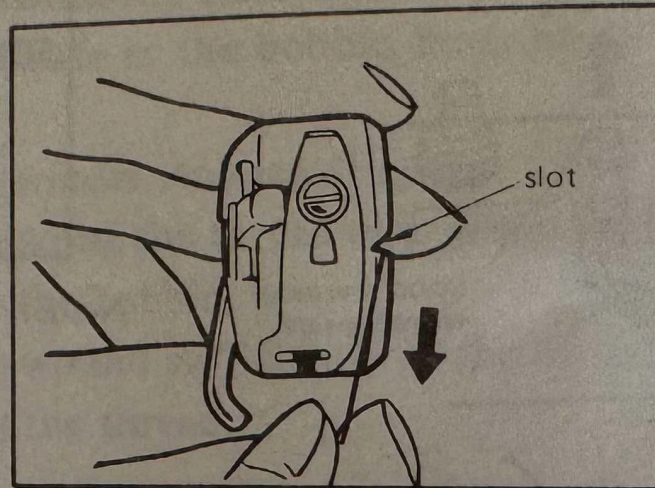
Note: The bobbin winder stopper should be adjusted so that the thread is wound 70 to 80% in the bobbin. When the bobbin is wound fully, the latch will be released automatically. If not, adjust the position of bobbin winder stopper as illustrated above.

TO THREAD BOBBIN CASE

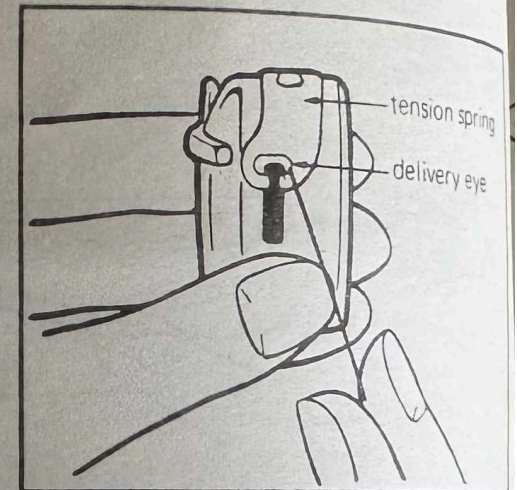
Holding the bobbin case between the thumb and the forefinger of your left hand, pull out about 10 cm (4") thread.



Holding the bobbin case in your left hand, turn the open side up and place the threaded bobbin into it as shown above, making sure the thread unwinds in the direction of arrow.

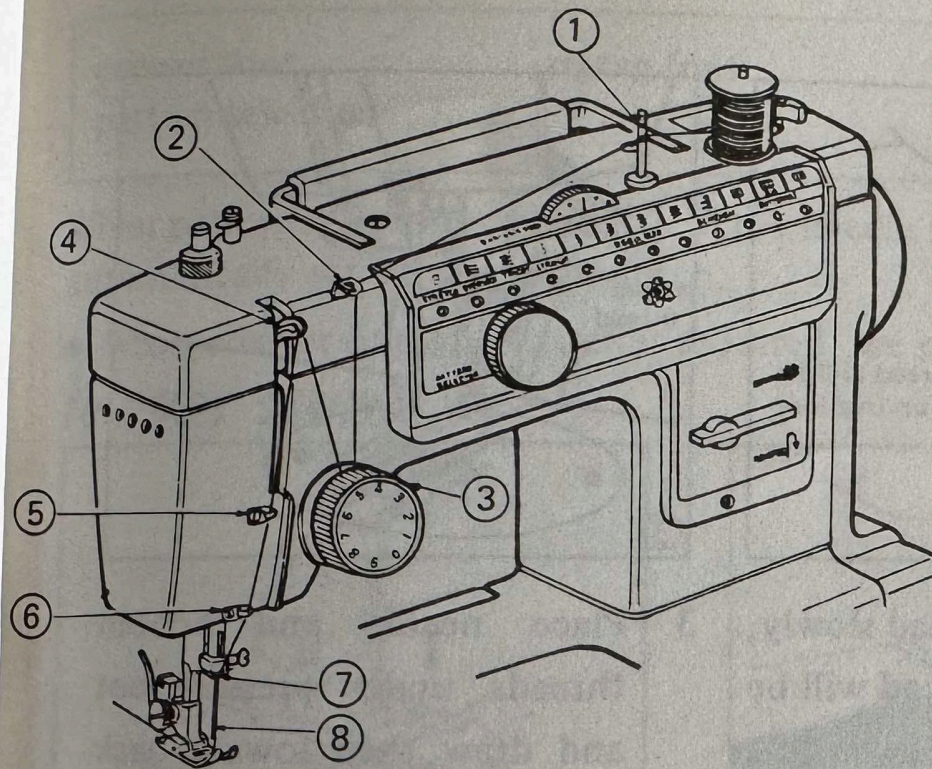


Guide the thread into the slot in the edge of the bobbin case.

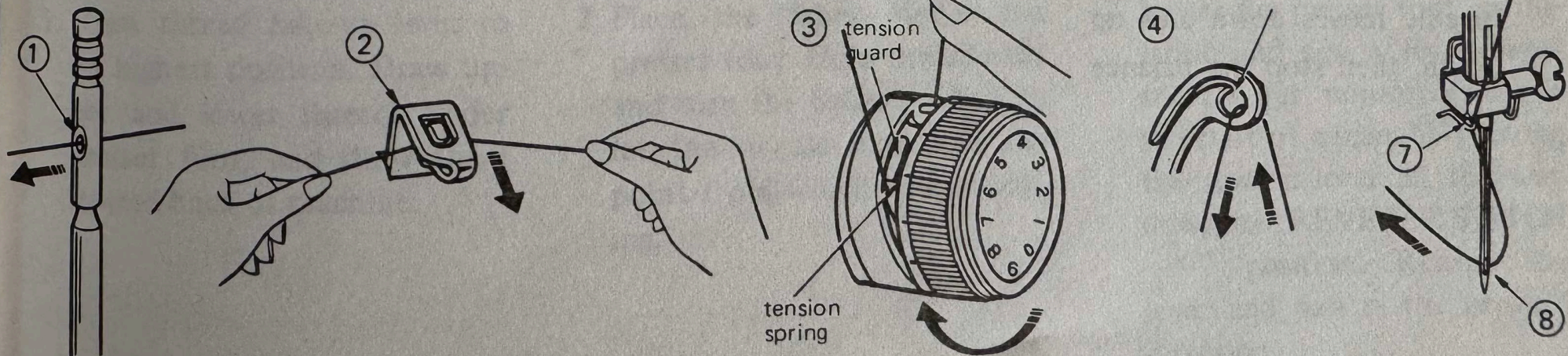


Pull it under the tension spring and then into the delivery eye.

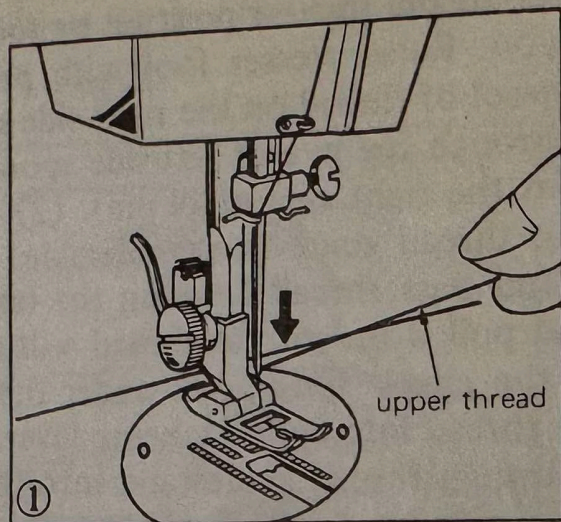
TO THREAD NEEDLE



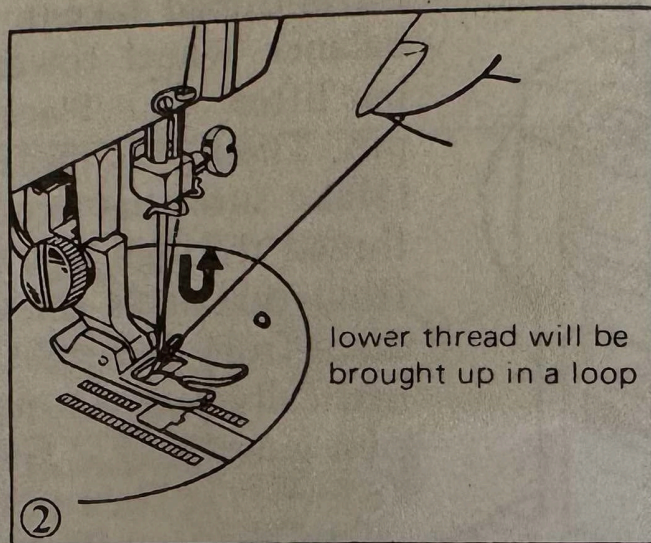
Raise thread take-up lever to the highest position by turning balance wheel toward you. Raise presser foot with presser bar lifter. ① Place a spool of thread on the right-side spool pin. Then pass thread through the eye of left-side spool pin (Make sure that eye faces the right side spool pin). ② Pass thread through top cover thread guide from underside. ③ Hold thread as shown and pass thread between the tension discs from the right and pull it up so that thread will automatically pass through the check spring and under the tension guard. ④ Guide thread into eye of take-up lever. ⑤ ⑥ ⑦ Then pass through thread guides and into thread guide at the end of the needle bar. ⑧ Thread needle from front to back, drawing about 15 cm (6") of thread from needle eye.



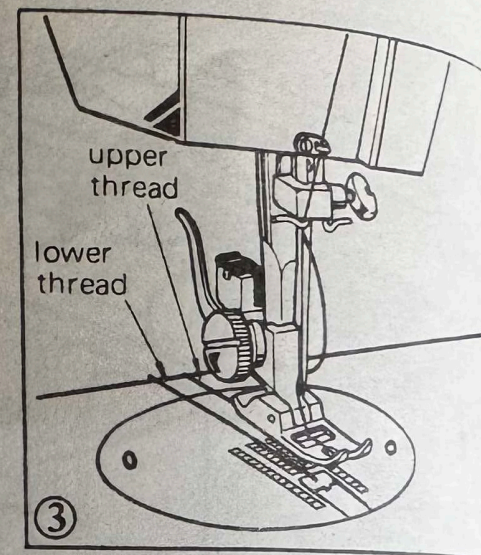
TO DRAW UP LOWER THREAD



1. Hold the end of the upper thread with your left hand. Turn the balance wheel towards you slowly until the needle moves down and up again, then stop the balance wheel.



2. Pull the upper thread slowly, then the lower thread will be brought up from the needle hole in a loop.



3. Place needle and bobbin threads under presser foot and draw then toward back of machine.

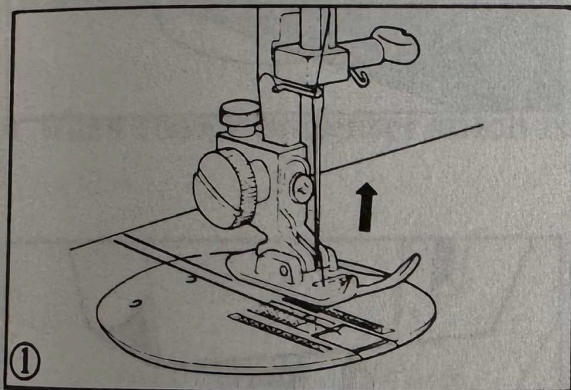
STRAIGHT SEWING

presser foot zigzag foot
pattern selector..... |

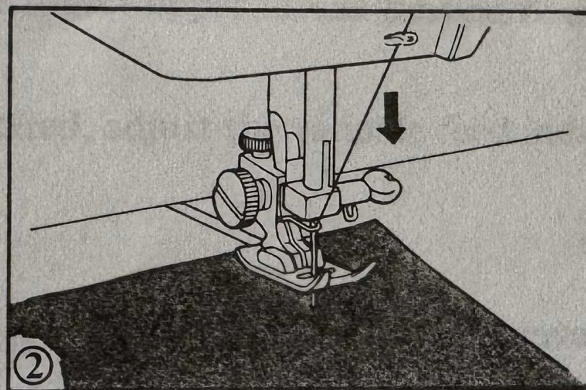
When pattern selector is set at “ | ”, the needle hole of needle plate is automatically set for a straight stitch.

- When coarser or denser stitch is required, see page 13

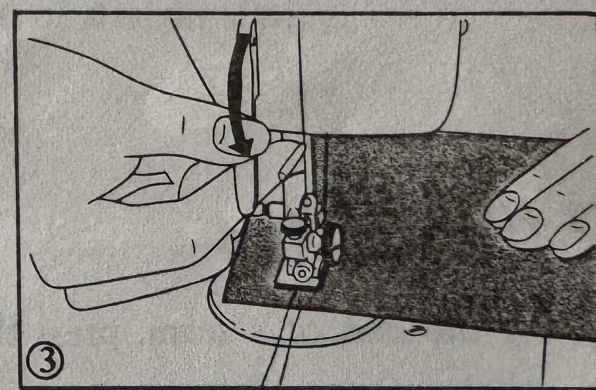
TO START SEWING



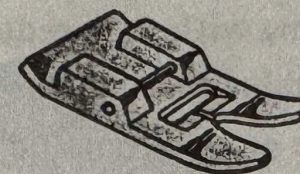
1. Raise thread take-up lever to its highest position. Draw upper and lower threads under presser foot, and draw them toward back of machine.



2. Place the fabric under the presser foot. Hold thread ends and turn the balance wheel to let the needle penetrate the point from which to start sewing.



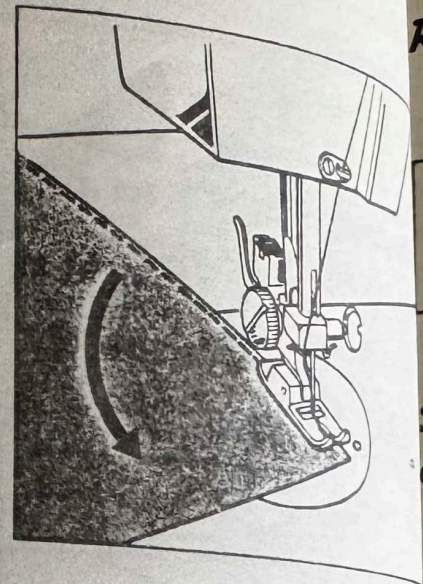
3. Lower the presser foot on the fabric and sew a few reverse stitches for reinforcement at the start of a seam by pressing the reverse lever all the way down to “REVERSE STITCH” position. Release the lever and sew in the forward direction.



zigzag foot

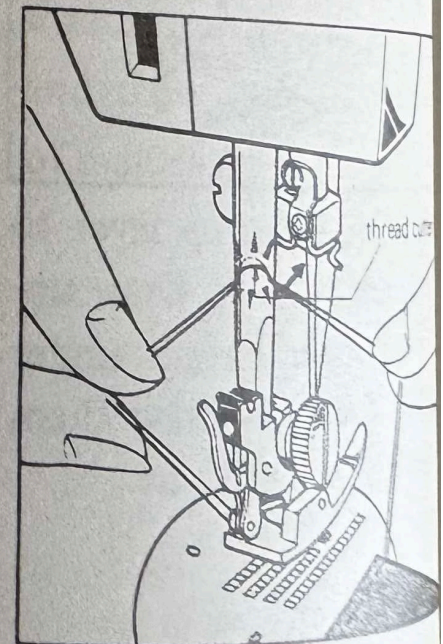
TO TURN CORNER

1. Stop sewing with the needle in the fabric and lift the presser foot.
2. Turn the fabric around the needle.
3. Lower the presser foot and start to sew again.



TO FINISH SEAM

1. At the end of a seam, press the reverse lever to sew a few reverse stitches for reinforcement.
2. Stop the machine when the thread take-up lever is at its highest point. Raise the presser foot and remove the fabric away from you.
3. Sever the thread with either the thread cutter slotted in the presser bar or with a pair of scissors, leaving about 15 cm (6") of thread from the eye of the needle.



REGULAR ZIGZAG SEWING

presser foot	zigzag foot
pattern selector	⌘ ~ ≡



zigzag foot

Stitch pattern symbols “⌘” “~” “≡” indicate the width of regular zigzag stitches. Generally, zigzag patterns may require looser upper thread tension than that of straight sewing.

- When coarser or denser stitch is required, adjust the variable feed indicator.

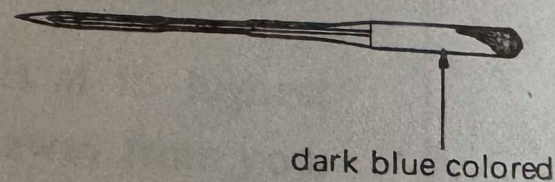
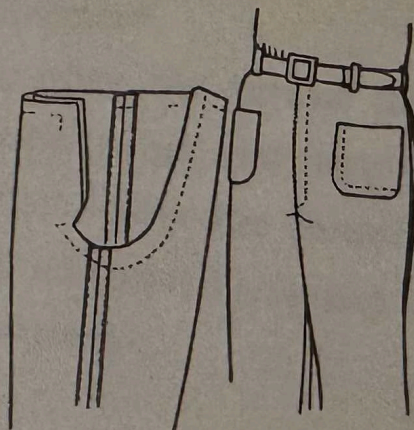
TRIPLE LOCK STRETCH STITCH

presser foot zigzag foot
pattern selector |||


This stitch is useful for sewing on stretch fabrics and for reinforcing seams on crotch, pocket, belt loop and etc. or any part of a garment where there is extra stress or pull.

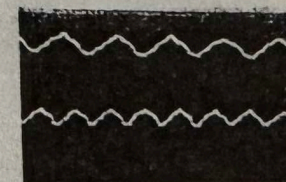
When pattern selector is set at “ ||| ”, the needle hole of needle plate is automatically set for triple lock stretch stitch.

- Blue tip scarf needle is recommended for sewing stretch materials for prevention of skipped stitches.



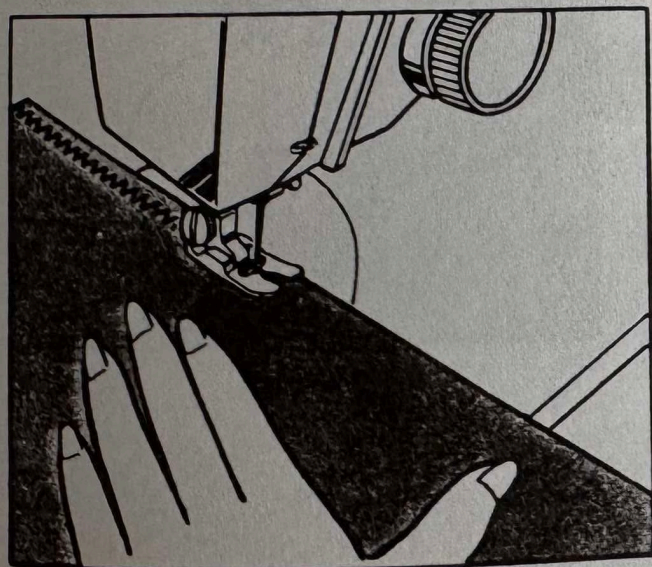
TRICOT ZIGZAG STITCH

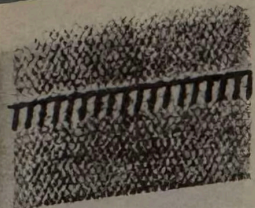
presser foot zigzag foot
pattern selector 




This stitch is well suited for mending such as rents and tears.
It is also useful for application of elastic materials.

- In order to maintain the form or shape of the stretch material, the use of lining is recommend wherever possible.
- When coarser or denser stitch is required, see page 13 .
- Blue tip scarf needle as shown in page 26 is effective in preventing skipped stitches with stretch materials.



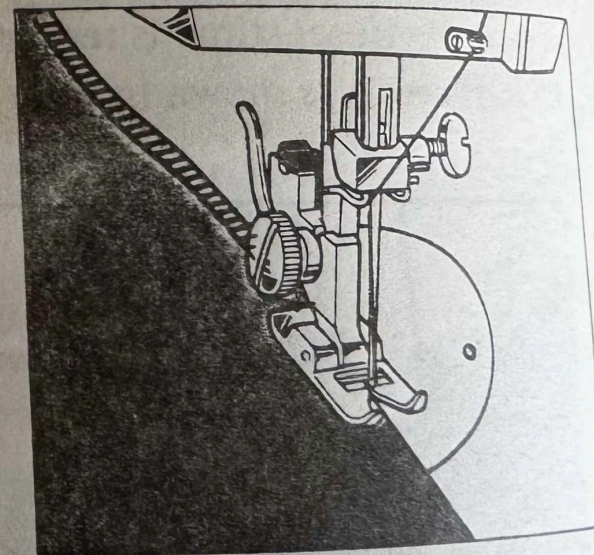


OVERLOCK STITCH

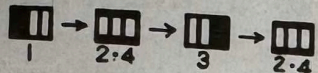
presser foot zigzag foot
pattern selector 

You can make neat, durable finish for raw-edge seams, especially in bulky fabrics or ones that fray easily. Overlock stitch will be done most successfully when the right side stitches of zigzag fall slightly off the edge of the cloth.

- In order to maintain the shape of material, use of lining is recommended.
- Blue tip scarf needle as shown in page 26 is effective in preventing skipped stitches with stretch materials.



BUTTONHOLE SEWING

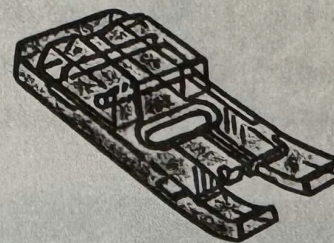
presser foot buttonhole foot
 pattern selector 

Mark on the garment the position of buttonhole and its length which should be just long enough to allow the button to slip through the opening without stretching it.

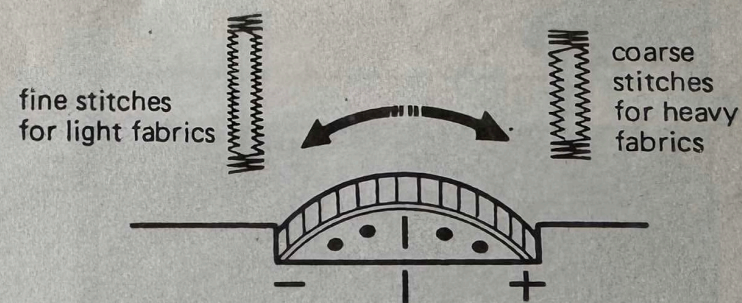
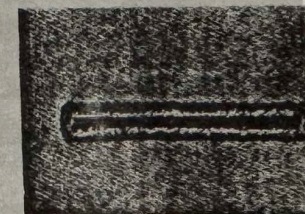
Replace the presser foot with the buttonhole foot.

Adjust the feed as illustrated for obtaining suitable coarseness of stitches depend upon the garment you sew.

- When you sew buttonholes on stretch materials, it is recommended to baste a piece of backing fabric underneath before sewing.



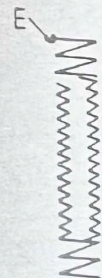
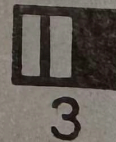
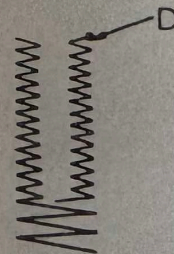
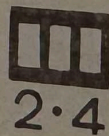
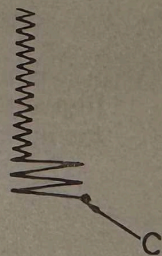
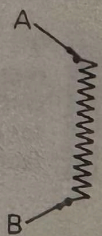
buttonhole foot



CONTINUED

CONTINUED

1. Set pattern selector at "1" and turn balance wheel toward you until the needle comes to the point (A).
2. Lower presser foot and sew slowly until a desired length is sewn. Then stop the machine at the point (B).
3. Raise needle and set pattern selector at "2·4". Then sew about five stitches of bar tack until needle comes to the point (C).
4. Raise needle and set pattern selector at "3" and sew the right row just as the same length as the left row. Then stop the machine at the point (D).
5. Raise needle and set pattern selector at "2·4". Then sew about five stitches of final bar tack and stop the machine with needle at the point (E).
6. Draw about 10 cm (4") of upper and lower threads. Cut threads. Then pull the end of lower thread to bring upper thread to the wrong side of fabric and lock threads.



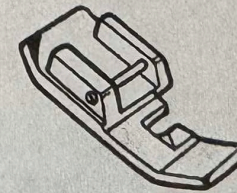
7. Cut button opening with a seam ripper or a pair of scissors carefully not to cut through the bar tacks.

Note: Before turning pattern selector, raise needle to its highest position.

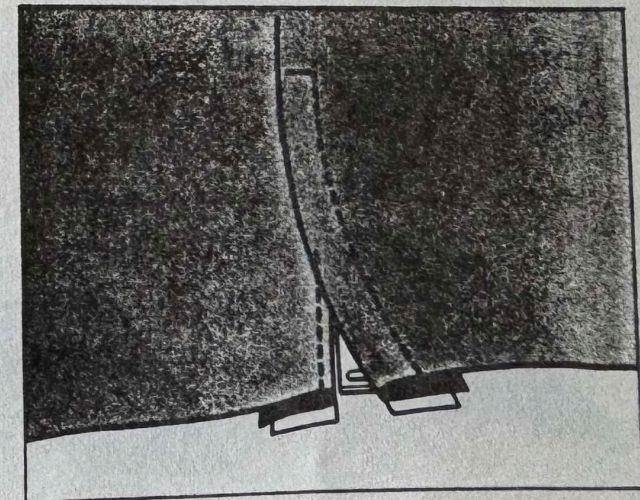
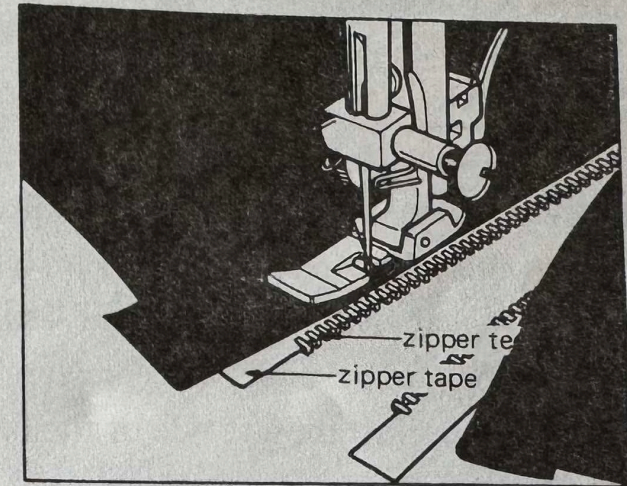
SEWING IN A ZIPPER

presser foot	zipper foot
pattern selector	


1. Pin or baste zipper tape to fabric and place it under foot as shown.
- When start sewing, both upper and lower thread ends should be put away through under the foot.
2. Sew on the left side of zipper while guiding zipper teeth as close as possible to the needle drop.
3. Turn fabric and sew other side of zipper in the same way as you did on left side of zipper.
- When longer or shorter stitch length is required, regulate the variable feed indicator. (See page 13.)



zipper foot



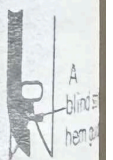
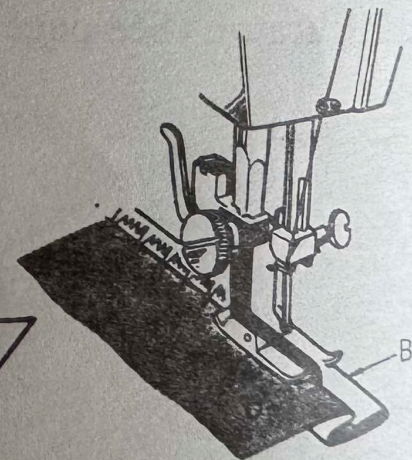
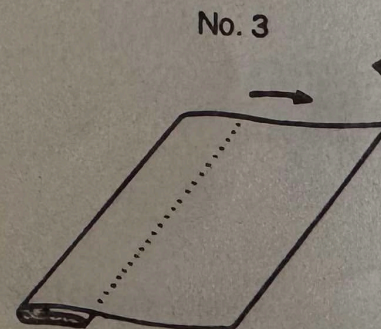
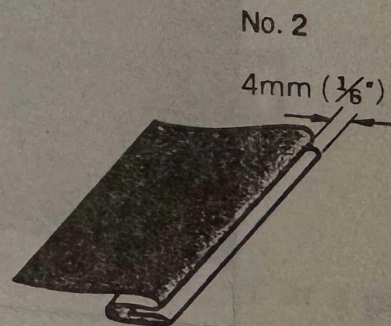
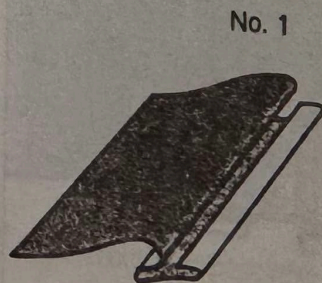
TO SEW BLIND HEM STITCH

presser foot zigzag foot
 pattern selector 
 attachment BS hem guide

1. Turn the balance wheel until the feed goes down below the needle plate level. Lower the presser foot.
2. Then loosen the thumb screw to insert the blind stitch hem guide between the screw and the foot holder.
3. Tighten the thumb screw making sure the

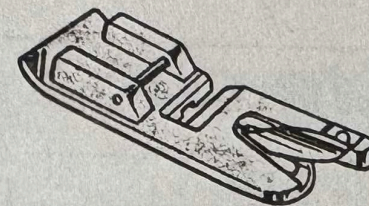
the guide (A) is placed in the middle of the toes of the presser foot.

4. With the fabric inside out, fold it to the desired size of hem. (No. 1)
5. Fold it again leaving a margin of 4 mm ($\frac{1}{6}$ ") on the bottom fold (B). (No. 2)
6. Place the fabric under the presser foot with the double fold line against the left side of the blind stitch hem guide.
7. Lower the presser foot and sew as you feed the double fold (C) along the guide.
8. Unfold the fabric and you will have a blind stitch hem. (No. 3)



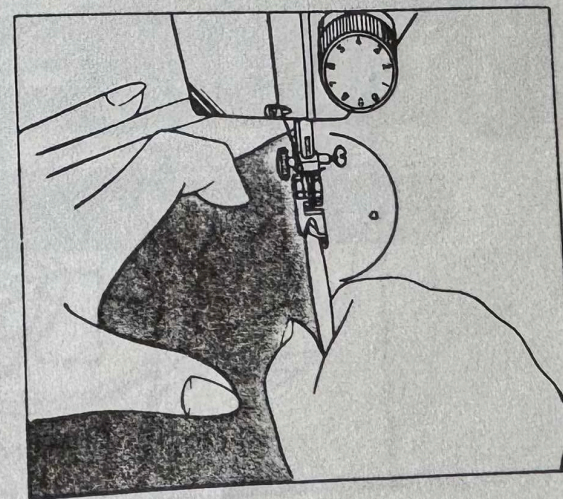
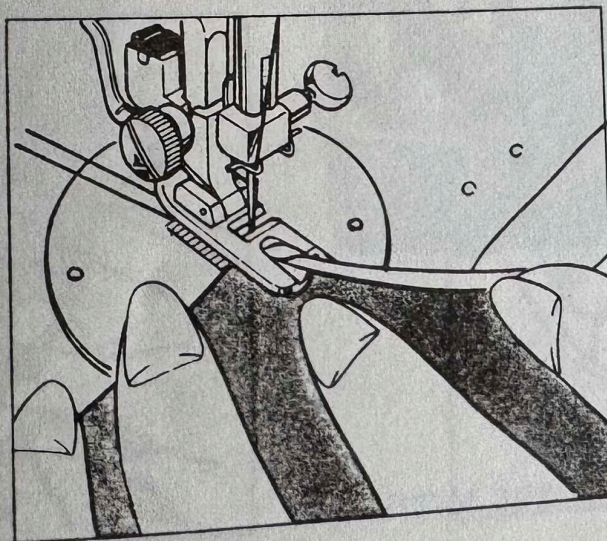
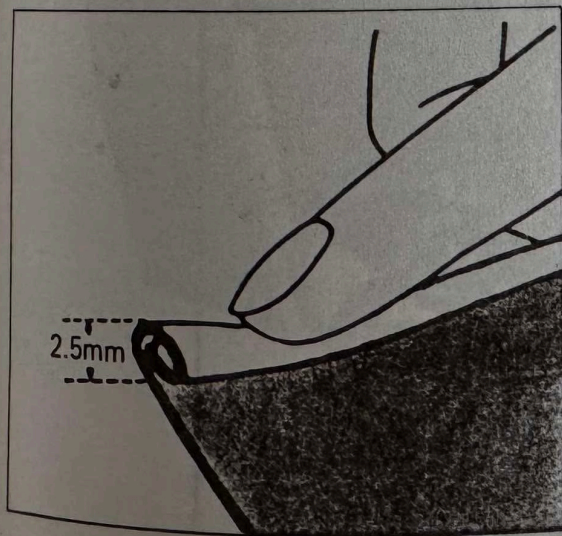
HEMMING

presser foot hemmer foot
pattern selector |




hemmer foot


1. Crease a double 2.5 mm ($3/32''$) fold for about 6 cm ($2-3/8''$) along the edge of fabric to be hemmed.
2. Place folded edge under foot and lower needle. Then lower hemmer foot and pull both thread ends backward until a few stitches are sewn.
3. Raise the foot and insert folded edge into the mouth of foot with needle in fabric.
4. Lower the foot. While sewing, hold fabric carefully with your right hand so that it is evenly fed into mouth of hemmer foot.





EMBROIDERY

presser foot and foot holder take off
pattern selector
reverse lever DARNING 

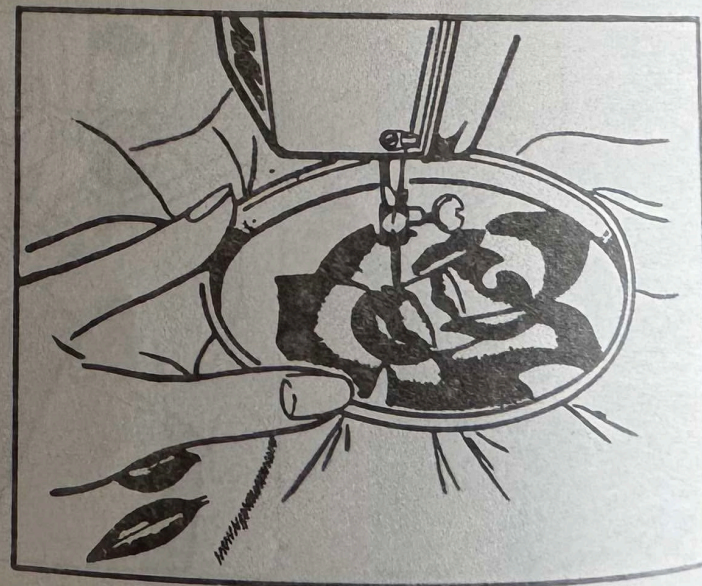
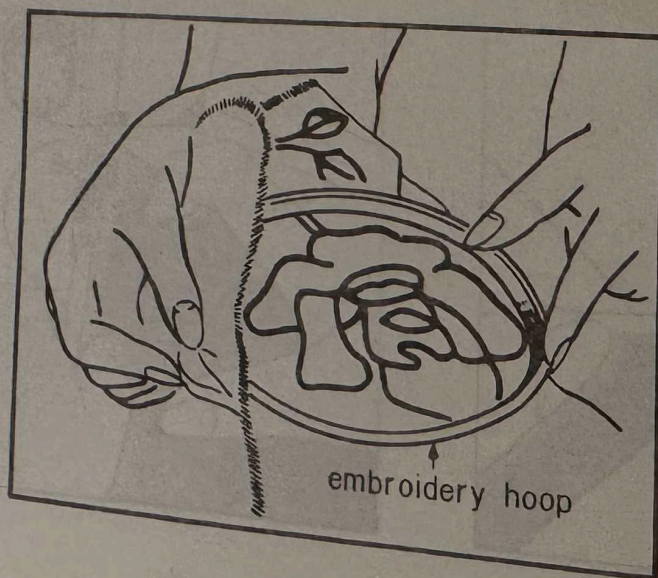
Set reverse lever at "DARNING ".

Then lower presser bar lifter. Hold the hoop closely on the machine bed with both hands, press the material with your left forefinger in the vicinity of the needle.

While moving the hoop slowly with the left hand following the design in the fabric.

(Set thread tension regulator as light as possible lest the lower thread should be pulled up to on the surface.)

- Draw your desired design on the fabric with a pencil or tailor's chalk before sewing.
- Embroidery will be done most successfully when the fabric is stretched and fixed in an embroidery hoop.

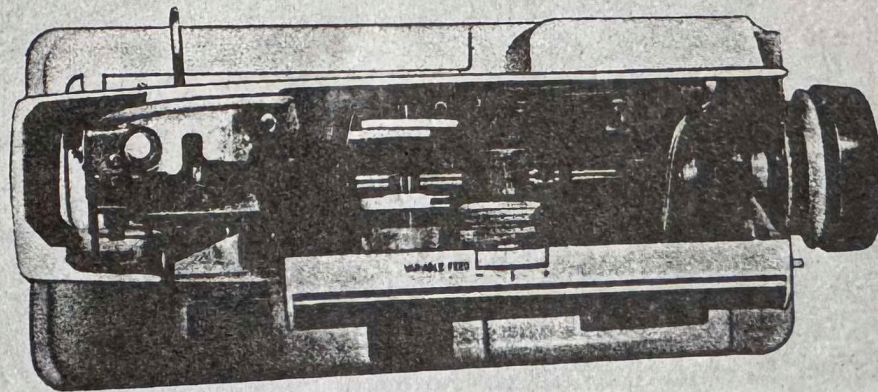
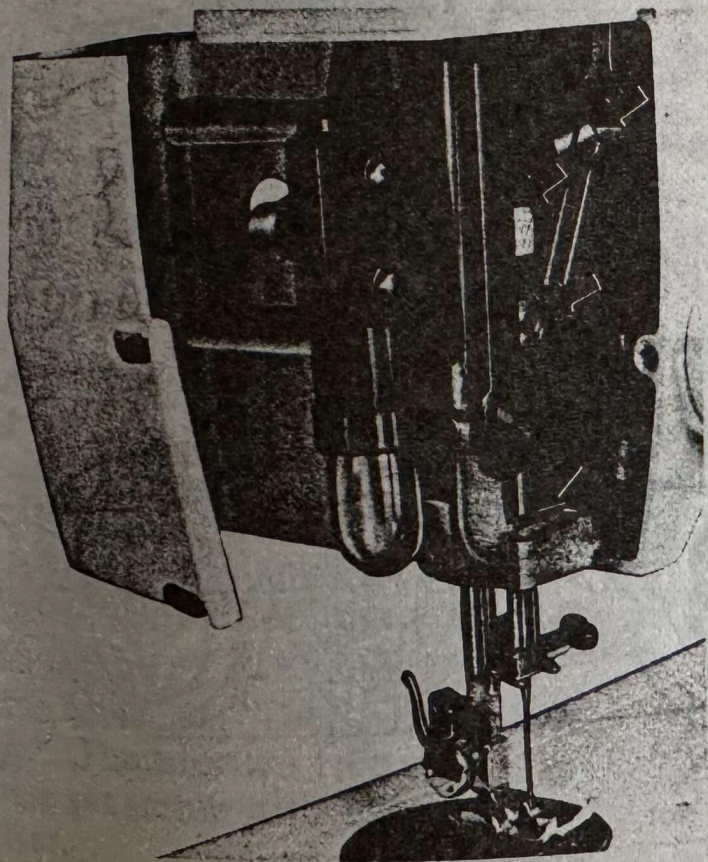


TO OIL MACHINE

Apply a few drops of fine quality sewing machine oil to the points indicated by the arrows in the figures.
For a machine in constant use, oil two or three times a week.

In case the machine does not work smoothly due to standing idle for some time, apply a few drops of kerosene at the oiling points, and run the machine rapidly for a minute.

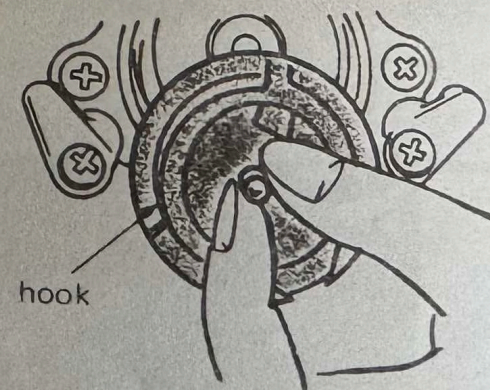
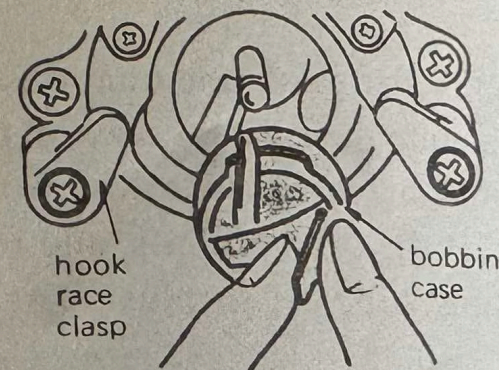
After oiling, wipe off surplus oil at the oiling points.



- Do not apply oil to the electrical equipments.

TO DISMANTLE HOOK RACE

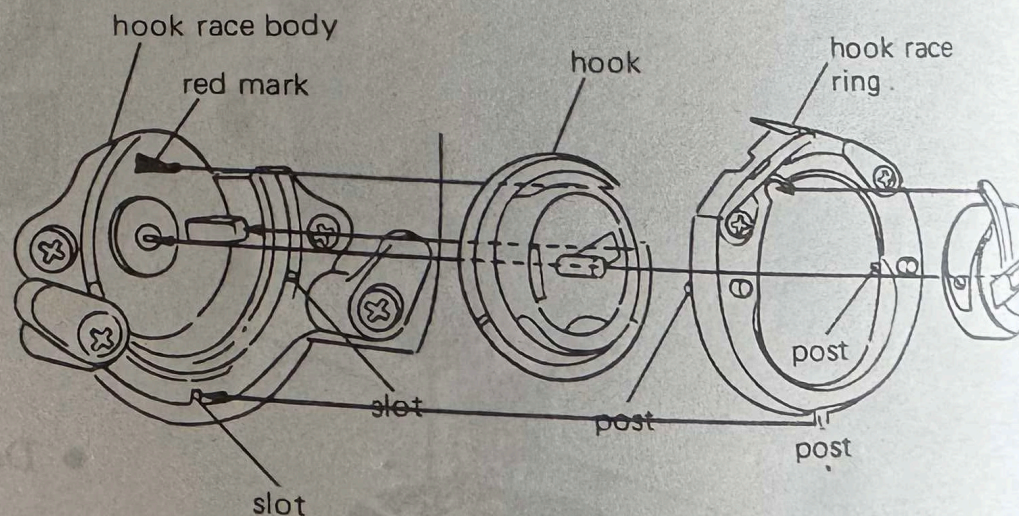
1. Turn the balance wheel towards you, raise the needle bar to its highest point and open the hook cover.
2. Remove the bobbin case by the latch.
3. Open the hook race clasps outward, remove the hook race ring and the hook.



TO ASSEMBLE HOOK RACE

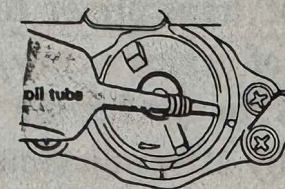
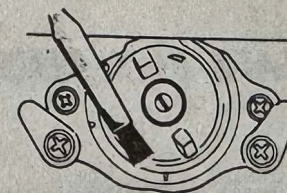
Assemble the hook race in the reverse order.

1. Insert the hook into the machine with its tip against the red marking on the plastic hook driver so that the posts on the hook driver fit into the slots in the hook.
2. Put the hook race ring on the hook race body with its small guide pins against the hole in the hook race body.
3. Hold the hook race ring with the race clasps.

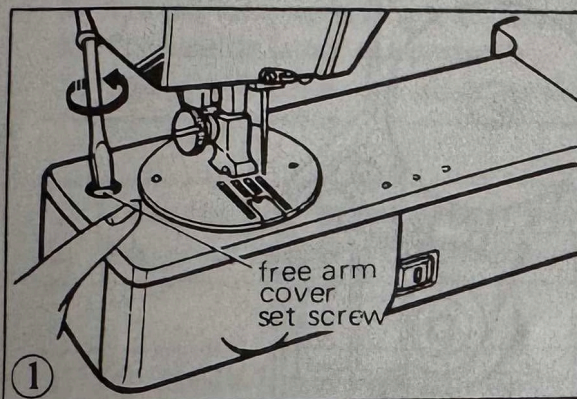




TO CLEAN HOOK RACE

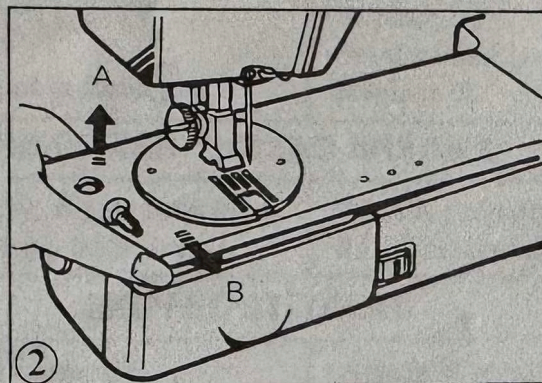
1. Clean the inside of the hook body with a brush. And also clean hook and hook race ring.
2. Apply a few drops of oil after cleaning.
- Do not oil too much. Surplus oil will stain the bobbin thread.



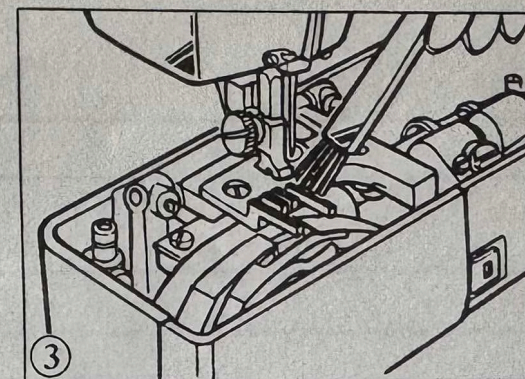
TO CLEAN FEED DOG



1. Turn the balance wheel bar comes to its highest toward you until the needle position of travel. Raise presser bar lifter and remove presser foot. Set pattern selector at “” and reverse lever at “DARNING ”. Then loosen free arm cover set screw with a screw driver.



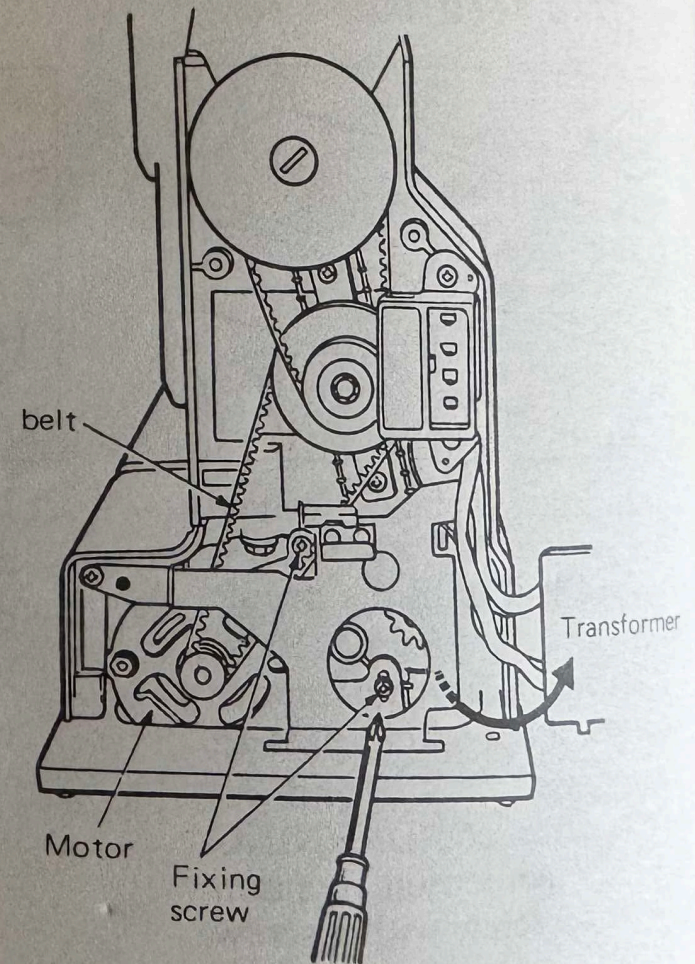
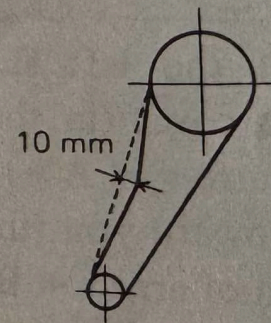
2. Lift the left side of free arm cover (in the direction of arrow « A ») and move it toward you (in the direction of arrow « B »).



3. Clean feed dog with a brush.
4. Hold free arm cover and tighten free arm cover set screw firmly.

TO REGULATE BELT TENSION ON MOTOR

To adjust belt tension, take off top cover and belt cover. Pull the top of transformer toward you to remove. Then loosen 2 pieces of fixing screw and move the motor upward or downward to obtain the suitable belt tension. Tighten the screw firmly after adjustment.



UNSATISFACTORY CONDITIONS: CAUSES AND REMEDIES

THE UPPER THREAD BREAKS

CAUSE	REMEDY
1. The needle is not threaded correctly.	Thread the needle correctly.
2. The tension is too tight.	Loosen it.
3. Something is wrong with the needle.	Replace it.
4. The thread used is too heavy for the needle.	Replace it.
5. Thread take-up spring is broken.	Replace it.
6. The needle is not set correctly.	Set it correctly.
7. The needle plate, the hook, or the presser foot is damaged.	Replace it.

THE LOWER THREAD BREAKS

1. When the lower thread is not wound correctly, it gets entangled.	Wind it properly.
2. The lower thread is off the tension spring of the bobbin case.	Put it in its proper position.

SKIPPED STITCHES

1. The needle is not attached to the needle bar correctly.	Attach it properly.
2. The needle is either bent or blunt.	Replace it.
3. A worn needle is used.	Replace it.

THE NEEDLE BREAKS

1. The needle is bent.	Replace it.
2. The needle is not attached properly.	Attach it correctly.
3. The material is too thick or heavy.	Use a needle of the correct size.
4. The material is being pulled by the operator.	Do not pull on the cloth.
5. The needle is of inferior quality.	Replace it with better needle.

CONTINUED

CONTINUED

STITCHING FORMS LOOPS

CAUSE	REMEDY
1. The thread tension is not properly adjusted.	See instructions for adjustment of upper and lower thread tensions.
2. The needle is not threaded correctly and/or the bobbin is not wound properly.	Thread the needle and/or rewind the bobbin properly.
3. The weight of the material and the size of the thread are not appropriate.	See instructions covering the use of proper needle and threads with varying materials.
4. Thread take-up spring does not work well.	Replace it.

SEAMS SHRINK OR PUCKER

1. The thread tension is too tight.	See instructions for adjustment of upper and lower thread tensions.
2. The pressure of the presser foot is too strong.	See instructions for adjustment of the pressure of the presser foot.
3. Stitches are too small for the weight of the material.	Adjust the stitch length.

IRREGULAR STITCHING

1. The upper and lower threads are of inferior quality.	Use thread of best quality.
2. The thread is wound around the bobbin unevenly.	Rewind it.

THE MACHINE DOES NOT WORK SMOOTHLY AND IS NOISY

1. The machine is in need of oil.	Apply oil as per instructions.
2. Dust and waster thread have collected in the hook mechanism.	See instructions pertaining to cleaning the race and hook.
3. Oil of inferior quality is used and has coagulated.	Clean thoroughly and oil again with proper sewing machine oil of the best quality.
4. The tension on the belt is too tight.	Loosen the belt tension.